

Supporting Finnish Chip Excellence



Finnish Chips Competence Centre

Enabled by EU and national funding | A consortium | Linked to Finnish semiconductor R&D

Optica, 17.7.2026, Maastricht – Tomi Salo

Outline

- The Starting Point in FiCCC – Aligning National Strategy with Chips Act
- Finnish Chips Competence Centre
- Needs of Industry Verticals
- How We Serve
- Skills and Talent Activities

2024

Chips from the North: Semiconductor Strategy for Finland

2035

€1,6B industry revenues

90 companies across value chain

7.000 direct employees

Competitive advantages

Societal predictability and infrastructure

Mobile network expertise

System chip design

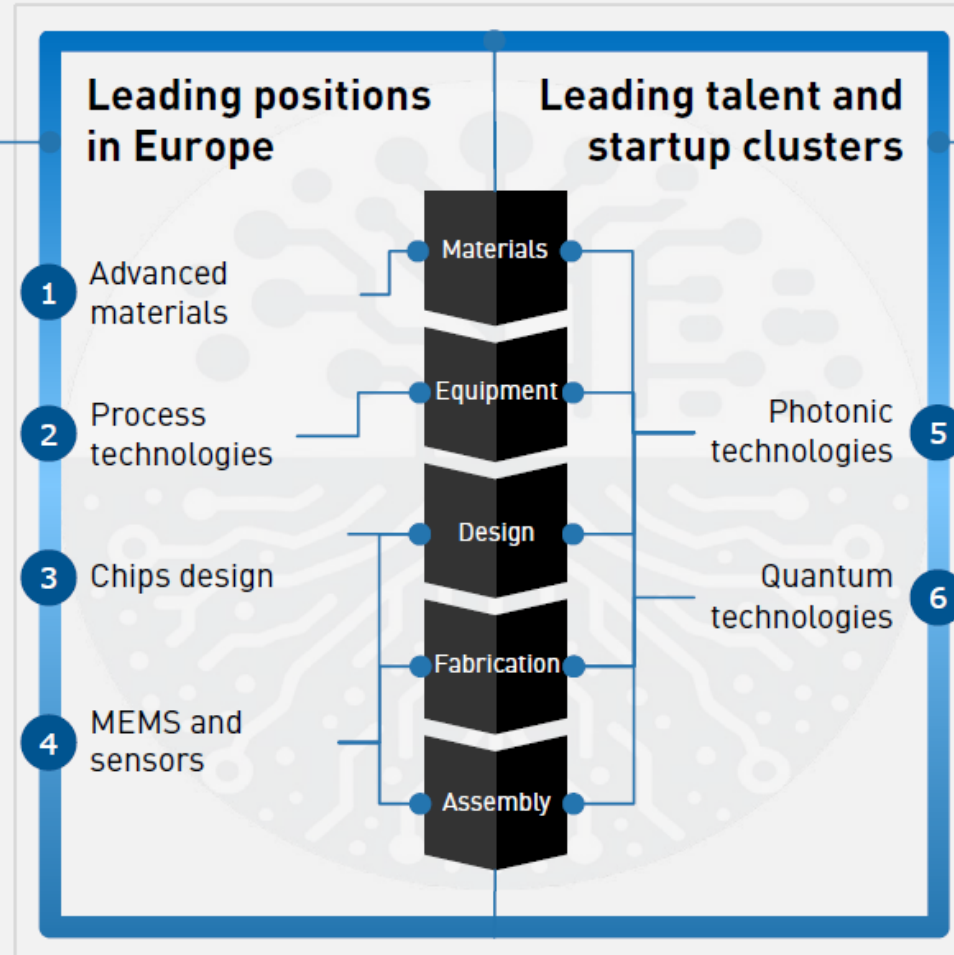
Sensors and MEMS

Process and material technologies

Photonic technologies

Quantum technologies

Finland's six growth opportunities



€5B to €6B in industry revenue

€90B to €180B indirect value

20.000 direct employees

Enabling outcomes

Industry-academia-public collaboration
Effective collaboration structures and resources

Competitive R&D ecosystem
Joint R&D funding of €5B over ten years

Over 15.000 new employees
Elevated education output and talent attraction

New established R&D and design centers
Promotion of talent, startup and technology clusters

Over €1B manufacturing site investments
Public-private collaboration and public instruments

Background

Vibrant and unique semiconductor industry is the best kept secret in Finland

Rooted in strong academic research in many relevant fields

Long tradition in the collaboration between industry, academia and VTT

Small country, “everybody knows everybody else”





PHOTONICS SUCCESS STORIES

SUOMI
FINLAND



FiCCC born and raised by EU & National strategy – Focus on semiconductors AND relevant verticals

Chip For Europe Initiative

EuroCDP

EDA

PDKs

IPs

Quantum tools /IP

Competence centers

Pilot lines

PL1

PL2

PL3

PL4

PL5

PL6

Quantum Pilot Lines

“Chips Fund”

Chips From The North, National Strategy (TIF)

Growth opportunities



Outcomes

1. Competitive R&D ecosystem

3. R&D & site investments

2. Workforce growth

4. Manufacturing investments

5. Ecosystem growth

FiCCC
Finnish Chips Competence Centre

Research



Industries (With national interest)



FiCCC service path: From ideas to validated solutions

Capability Mapping

- Know what you know – **and what not**
- Assess competences, technology readiness and business needs
- Identify knowledge gaps, missing partners, IP needs, and risks
- Create a roadmap aligned with business goals

PoC & Pilot Pathway

- Build Proof-of-Concepts (PoCs)
- Evaluate manufacturability, performance and business potential
- Connect companies to partners, funding and testing infrastructures
- Access European pilot lines, design platforms and competence centres

Competitive Products

- Design and industrialize application-specific chips
- Create proprietary IP and long-term competitive advantage
- Integrate chips into products and services
- Scale from prototypes to commercial volume

Case example: Startup relocating from the US to Finland



Needs assessment for industrial companies

Fourteen companies interviewed during February...May 2026

Industries ranged from critical infrastructure to intelligent work machines and health tech/ medtech

→ Further deep-dives with the companies

Three main technological themes identified:

1. WBG, Power Electronics, Packaging
2. Sensors, Photonics, Sensor Fusion
3. Edge-AI, Computing Platforms and Accelerators

Challenge: High Mix – Low Volume

Solution: Building value chains instead of isolated ecosystems

From ecosystems to action systems

For a small country, isolated ecosystems are not enough. We must move from **ecosystems** to **action systems**:

- Connecting multiple ecosystems into a value-creation pipeline
- Increasing demand aggregation and market volume
- Combining expertise across industries and regions
- Accelerating learning, testing and commercialization
- **Creating stronger business cases for semiconductor investments**

**More connections → More volume → More business opportunities
→ More chips designed and manufactured in Finland and Europe.**

Solving the skills and talent challenge

Short Range
(1...3 years)



- International talent attraction
- Upskilling and reskilling courses development
- Helping educated spouses to land in the industry

Mid Range
(2...7 years)



- Collaboration with doctoral programs
- Cleanroom skills for vocational students
- Raising awareness among high schoolers and fresh university students

Long Range
(7+ years)



- Chip industry in Yrityskylä (“Company Village”) for 6th graders
- SiruStart (“ChipStart”) utilizing Arduino Grove Beginner Kit for 9th graders

Thank You



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Kvanttinova
CHIPS TO SYSTEMS



FiCCC is supported by the Chips Joint Undertaking
and its members, as well as Business Finland.

**BUSINESS
FINLAND**